



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/673,484

09/30/2003

Tomoo Yamasaki

300.1132

1523

21171

7590

01/13/2005

STAAS & HALSEY LLP
SUITE 700
1201 NEW YORK AVENUE, N.W.
WASHINGTON, DC 20005

EXAMINER

TRINH, MICHAEL MANH

ART UNIT

PAPER NUMBER

2822

DATE MAILED: 01/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/673,484

Applicant(s)

YAMASAKI ET AL.

Examiner

Michael Trinh

Art Unit

2822

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 January 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 6 is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☒ Claim(s) 4 and 5 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 12/18/03.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Art Unit: 2822

DETAILED ACTION

*** This office action is in response to Applicant's election filed October 29, 2004. Claims 1-7 are pending. Claims 8-11 were canceled.

Election/Restrictions

1. Claims 8-11 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim.

Election was made without traverse in Paper mail date October 29, 2004.

** Claims 8-11 were also cancelled by Applicant.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Figueroa et al (6,446,317) taken with Adae-Amoakoh et al (6,370,012).

Figueroa teaches a thin-film capacitor device comprising: a lower electrode formed on a surface of a core substrate 902; a dielectric film 1502 generated from a metal film 1304 formed on the lower electrode (Figs 15-17; col 10, lines 7-41; col 8, lines 15-55); an upper electrode 1702 formed on the dielectric film 1502 (Figs 18-20; col 10, lines 41-65); and a first conductor 1302 extending from said lower electrode toward an opposite surface of said core substrate 902, wherein a second conductor 2104,2102 connected to said upper electrode 1702 (Fig 21, col 11,

Art Unit: 2822

lines 10-64). Re claim 2, wherein the first conductor 1302 is filled into a groove formed in said core substrate 902 (Figs 12-14) when forming said lower electrode thereon, and said opposite surface of said core substrate having the groove is exposed (Figs 13-14; col 9, lines 59-67; lines 20-58). Re claim 3, wherein the metal film 1304 is made of tantalum so that the dielectric film 1502,1202 is generated by anodic oxidation of said tantalum (col 8, lines 34-43; col 10, lines 7-33).

Re base claim 1, Figueroa already teaches forming the first conductor 1302 and the second conductor 2104,2102 connected to the electrodes (Figs 10-21), but lacks providing electrode pads on the conductors.

However, Adae-Amoakoh teaches (at Figs 6,8; col 7, lines 1-20; col 6, lines 1-20) forming on surfaces of the core substrate with first electrode pad 33' on the first conductor 33 and a second electrode pad 33' on the second conductor 33, wherein the solder balls 55 are formed on these electrode pads 33' (Fig 8).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the capacitor of Figueroa by forming the electrode pad on each of the first and second conductors as taught by Adae-Amoakoh. This is because of the desirability to provide the pads for forming solder balls thereon so that it is facilitating and easy bonding of the capacitor to circuit board through the solder balls formed on the electrode pads.

With respect to "grinding..." and "anodic oxidation", a "product by process" claim is directed to the product per se, no matter how actually made, *In re Hirao*, 190 USPQ 15 at 17 (footnote 3). See also *In re Brown*, 173 USPQ 685; *In re Luck*, 177 USPQ 523; *In re Fessmann*, 180 USPQ 324; *In re Avery*, 186 USPQ 161; *In re Wertheim*, 191 USPQ 90 (209 USPQ 554 does not deal with this issue); *In re Marosi et al*, 218 USPQ 289; and particularly *In re Thorpe*, 227 USPQ 964, all of which make it clear that it is the patentability of the final product per se which must be determined in a "product by process" claim, and not the patentability of the process, and that an old or obvious product produced by a new method is not patentable as a product, whether claimed in "product by process" claims or not.

Art Unit: 2822

Allowable Subject Matter

4. Claim 6 is allowed.

5. Claims 4-5 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The references including Figueroa et al (6,446,317), Adae-Amoakoh et al (6,370,012), etc. of record, alone or in combination, do not anticipatively disclose each and every aspect of the claimed capacitor, or fairly make a prima facie obvious case of the claimed capacitor, in combination with other claimed limitations, the inclusion of claimed limitations as recited in claim 4.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael M. Trinh whose telephone number is (571) 272-1847. The examiner can normally be reached on M-F: 8:30 Am to 5:00 Pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amir Zarabian can be reached on (571) 272-1852. The fax phone number is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application should be directed to the receptionist whose telephone number is (703) 308-0956.

Oacs-15



Michael Trinh
Primary Examiner